Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

Reserve
A280.39
M34Am

AMS-128
(Supplement No. 4)

October 10, 1956

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service
Cotton Division

LIBRARY
CURRENT SERIAL RECORD
OCT 23 1956
U. S. DEPARTMENT OF AGRICULTURE

FIBER AND SPINNING TEST RESULTS FOR SOME VARIETIES OF COTTON GROWN BY SELECTED COTTON IMPROVEMENT GROUPS

CROP OF 1956

Prepared in the Standards and Testing Branch

Agriculture - Washington

Table 1.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 12-1/2 pounds per hour, crop of 1956

Test item	Lockett SP-1	Lockett 88	Paymaster 54B	Paymaster 101
	Texas			
	Lubbock	Vernon	Lockney	Plainview
	Early	Midseason	Early	Early
Raw Cotton Quality				
Grade (official standards)	SM	SM	SMltsp	SMltsp
Staple length--------------------inches	15/16	29/32	15/16	31/32
Fiber length (Fibrograph):				
Upper half mean----------------inches	.91	.84	.90	.93
Uniformity ratio--------------------	81	82	81	81
Micronaire--------------------units 1/	3.8	4.4	3.9	3.8
Fiber fineness-----micrograms per in. 2/	4.1	4.8	3.9	3.8
Fiber maturity----------------index 2/	74	77	76	76
Fiber tensile strength (Pressley):				
1/8" gauge------------------index 3/	93	100	102	101
Zero gauge---------------1,000 p.s.i.	74	86	74	79
Nonlint content----------------percent	2.6	1.9	2.5	2.4
Color of raw cotton: 4/				
Reflectance-----------------------R_d	77.0	76.9	77.9	75.8
Yellowness------------------------+b	8.6	9.2	8.9	9.3
Sugar content------------------percent	0.4	0.2	0.3	0.3
Acid-alkaline value---------pH units 5/	6.6	7.7	7.7	6.5
Processing Results				
Picker and card waste-----------percent	8.8	8.5	7.8	8.9
Neps--------per 100 sq. in. of card web	22	17	27	25
Yarn skein strength:				
8s---------------------------pounds	308	324	350	344
22s--------------------------pounds	95	99	108	108
Average break factor 6/	2277	2385	2588	2564
Yarn appearance:				
8s----------------------------grade	B	B+	B	C+
22s---------------------------grade	C+	B	C+	C
Average index 7/	105	115	105	95

1/ Fiber fineness and maturity in combination, as measured on untreated samples.

2/ Determined by the Causticaire method using the Micronaire instrument.

3/ Index of 100 equals a Pressley ratio of 3.19, which was the average strength of 1954 commercial crop of upland cotton in the United States.

4/ Determined by the Nickerson-Hunter Colorimeter on raw stock. R_d values indicate percent reflectance from 0 to 100 and +b values indicate degree of yellowness.

5/ Values below 7.0 indicate acidity. Values above 7.0 indicate alkalinity which when associated with abnormally low sugar content may indicate fiber degradation from the action of micro-organisms.

6/ Based on yarn skein strength of the two yarn numbers spun.

7/ Based on two numbers spun. Index of average quality equals 100.

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour, crop of 1956

Test item	Acala 4-42	Arizona 44			
	California	Arizona			
	Blythe	Buckeye	Chandler	Phoenix	Yuma
	Early	Early	Early	Early	Early
Raw Cotton Quality					
Grade (official standards)	SM	SM	SM	M	SM
Staple length----------------inches	1-1/16	1-1/16	1-1/16	1-1/16	1-1/16
Fiber length (Fibrograph):					
Upper half mean------------inches	1.11	1.08	1.12	1.10	1.11
Uniformity ratio-----------------	81	81	82	81	81
Micronaire-----------------units 1/	4.6	4.7	4.6	4.6	4.4
Fiber fineness-micrograms per in. 2/	4.5	4.4	4.4	4.4	4.2
Fiber maturity-------------index 2/	81	82	80	81	80
Fiber tensile strength (Pressley):					
1/8" gauge---------------index 3/	121	118	110	116	113
Zero gauge-----------1,000 p.s.i.	94	96	90	92	92
Nonlint content-------------percent	2.4	2.5	2.5	2.6	2.6
Color of raw cotton: 4/					
Reflectance--------------------Rd	76.5	77.6	73.5	75.6	73.9
Yellowness---------------------+b	8.5	8.6	9.5	8.7	9.4
Sugar content---------------percent	0.2	0.3	0.2	0.3	0.3
Acid-alkaline value-----pH units 5/	7.4	7.7	8.0	8.0	8.2
Processing Results					
Picker and card waste-------percent	8.6	7.6	7.4	8.6	7.6
Neps----per 100 sq. in. of card web	14	12	19	14	14
Yarn skein strength:					
22s----------------------pounds	128	127	127	121	127
50s----------------------pounds	45	45	45	43	45
Average break factor 6/	2533	2522	2522	2406	2522
Yarn appearance:					
22s-----------------------grade	C	C+	C+	C+	C+
50s-----------------------grade	D+	C	D+	D+	C
Average index 7/	85	95	90	90	95

Continued on page 4

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour, crop of 1956--Continued

Test item	Coker 100 W				
	Alabama				Georgia
	Huntsville	Thomasville	Troy	Wetumpka	Atlanta
	Early	Midseason	Midseason	Midseason	Early
Raw Cotton Quality					
Grade (official standards)	SM	M	M	M	SMltsp
Staple length----------------inches	1-1/16	1-1/32	1-1/32	1-1/32	1
Fiber length (Fibrograph):					
Upper half mean------------inches	1.00	1.02	.99	1.00	1.03
Uniformity ratio-----------------	78	78	77	76	83
Micronaire-----------------units 1/	4.0	3.8	3.7	3.4	4.7
Fiber fineness-micrograms per in.2/	4.1	3.9	3.9	3.5	4.6
Fiber maturity-------------index 2/	76	75	74	73	81
Fiber tensile strength (Pressley):					
1/8" gauge---------------index 3/	100	100	92	96	103
Zero gauge-----------1,000 p.s.i.	84	84	79	80	85
Nonlint content-------------percent	2.1	2.7	2.6	3.3	2.4
Color of raw cotton: 4/					
Reflectance-------------------Rd	77.8	76.5	72.7	73.3	75.8
Yellowness--------------------+b	8.4	8.5	8.9	8.3	8.6
Sugar content---------------percent	0.1	0.2	0.1	0.2	0.2
Acid-alkaline value-----pH units 5/	7.0	7.2	7.5	7.4	7.2
Processing Results					
Picker and card waste-------percent	7.5	7.8	6.9	8.7	7.2
Neps----per 100 sq. in. of card web	19	20	20	20	12
Yarn skein strength:					
22s-----------------------pounds	125	127	119	120	121
50s-----------------------pounds	43	43	42	42	41
Average break factor 6/	2450	2472	2359	2370	2356
Yarn appearance:					
22s------------------------grade	B	C+	C+	C+	B
50s------------------------grade	C+	C+	C	C	C+
Average index 7/	105	100	95	95	105

Continued on page 5

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour, crop of 1956--Continued

Test item	Coker 100 W				
	Georgia				
	Atlanta	Baxley	Cartersville	Madison	Sandersville
	Midseason	Midseason	Early	Midseason	Midseason
Raw Cotton Quality					
Grade (official standards)	SM	M	M	Mltsp	SLM
Staple length----------------inches	1-1/32	1-1/32	1-1/32	1	1-1/32
Fiber length (Fibrograph):					
Upper half mean-----------inches	1.03	1.00	1.05	1.00	.98
Uniformity ratio-----------------	83	81	81	78	78
Micronaire----------------units 1/	4.8	4.3	4.2	3.8	4.1
Fiber fineness-micrograms per in. 2/	4.7	4.3	4.2	3.8	4.1
Fiber maturity-------------index 2/	82	78	78	75	78
Fiber tensile strength (Pressley):					
1/8" gauge---------------index 3/	105	94	104	99	97
Zero gauge----------1,000 p.s.i.	83	79	85	84	85
Nonlint content------------percent	2.5	2.5	2.0	4.2	3.4
Color of raw cotton: 4/					
Reflectance--------------------Rd	78.5	71.0	75.7	69.8	71.6
Yellowness--------------------+b	8.5	9.4	8.7	10.3	8.7
Sugar content--------------percent	0.2	0.1	0.2	0.2	0.0
Acid-alkaline value-----pH units 5/	7.9	8.5	7.1	7.6	8.9
Processing Results					
Picker and card waste-------percent	8.0	7.4	7.1	9.8	8.6
Neps----per 100 sq. in. of card web	12	17	20	17	14
Yarn skein strength:					
22s----------------------pounds	121	115	124	116	116
50s----------------------pounds	42	39	43	40	39
Average break factor 6/	2381	2240	2439	2276	2251
Yarn appearance:					
22s-----------------------grade	B	C+	C+	C+	C+
50s-----------------------grade	C+	C+	C+	C	C+
Average index 7/	105	100	100	95	100

Continued on page 6

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour, crop of 1956--Continued

Test item	Coker 100 W				
	North Carolina				S. Carolina
	Monroe	Raeford	Shelby	Scotland Neck	Aiken
	Early	Early	Early	Early	Early
Raw Cotton Quality					
Grade (official standards)	M	M	SM	SM	SLM
Staple length----------------inches	1-1/16	1-1/16	1	1-1/16	1-1/32
Fiber Length (Fibrograph):					
Upper half mean------------inches	1.08	1.07	.96	1.11	1.06
Uniformity ratio-----------------	81	79	81	83	80
Micronaire----------------units 1/	4.3	4.3	4.6	4.2	3.8
Fiber fineness-micrograms per in.2/	4.3	4.4	4.6	4.3	4.1
Fiber maturity------------index 2/	79	78	80	77	74
Fiber tensile strength (Pressley):					
1/8" gauge--------------index 3/	102	92	99	92	97
Zero gauge----------1,000 p.s.i.	78	71	85	68	75
Nonlint content------------percent	3.9	2.3	2.4	2.1	3.2
Color of raw cotton: 4/					
Reflectance-------------------Rd	75.0	73.6	72.5	75.5	71.6
Yellowness-------------------+b	8.3	8.7	8.9	8.4	8.6
Sugar content--------------percent	0.3	0.1	0.3	0.2	0.1
Acid-alkaline value-----pH units 5/	7.5	8.2	7.0	7.6	8.3
Processing Results					
Picker and card waste-------percent	9.4	7.2	7.8	7.6	8.9
Neps----per 100 sq. in. of card web	15	19	14	15	18
Yarn skein strength:					
22s----------------------pounds	121	112	113	117	122
50s----------------------pounds	43	40	38	42	43
Average break factor 6/	2406	2232	2193	2337	2417
Yarn appearance:					
22s-----------------------grade	C+	C+	C+	C+	C+
50s-----------------------grade	C+	C+	C+	C	C+
Average index 7/	100	100	100	95	100

Continued on page 7

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour, crop of 1956--Continued

Test item	Coker 100 W			Deltapine 15	
	South Carolina			Alabama	Louisiana
	Allendale	Dillon	Westminster	Florence	Bossier City
	Midseason	Early	Early	Early	Midseason
Raw Cotton Quality					
Grade (official standards)	SLM	SLM	M	SLM	M
Staple length----------------inches	1-1/32	1-1/32	1-1/32	1-1/16	1-1/32
Fiber length (Fibrograph):					
Upper half mean------------inches	1.05	1.05	1.04	1.05	1.01
Uniformity ratio-----------------	78	78	81	82	79
Micronaire----------------units 1/	3.7	4.2	4.2	3.7	4.4
Fiber fineness-micrograms per in. 2/	3.8	4.3	4.2	4.0	4.3
Fiber maturity-------------index 2/	75	77	78	73	79
Fiber tensile strength (Pressley):					
1/8" gauge---------------index 3/	97	103	100	97	106
Zero gauge-----------1,000 p.s.i.	79	78	80	79	84
Nonlint content------------percent	3.8	3.0	2.7	4.1	2.4
Color of raw cotton: 4/					
Reflectance--------------------R_d	69.5	74.6	75.5	72.0	74.3
Yellowness--------------------+b	8.9	9.2	9.2	8.0	8.6
Sugar content--------------percent	0.0	0.1	0.3	0.2	0.2
Acid-alkaline value-----pH units 5/	8.8	7.4	6.7	7.0	79
Processing Results					
Picker and card waste-------percent	8.8	8.3	7.7	8.4	7.6
Neps----per 100 sq. in. of card web	25	22	13	13	13
Yarn skein strength:					
22s-----------------------pounds	121	118	124	127	115
50s-----------------------pounds	42	40	42	45	39
Average break factor 6/	2381	2298	2414	2522	2240
Yarn appearance:					
22s-------------------------grade	C+	C+	B	C+	C+
50s-------------------------grade	C	C+	C+	C+	C
Average index 7/	95	100	105	100	95

Continued on page 8

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour, crop of 1956--Continued

Test item	Deltapine 15				
	Louisiana				
	Cheneyville Midseason	Lake Providence Midseason	Mer Rouge Midseason	Natchitoches Midseason	Shreveport Midseason
Raw Cotton Quality					
Grade (official standards)	SLM	SM	M	SLM	M
Staple length----------------inches	1-1/16	1-3/32	1-1/16	1-1/32	1-1/32
Fiber length (Fibrograph):					
Upper half mean------------inches	1.05	1.06	1.06	1.01	1.06
Uniformity ratio-----------------	80	79	80	80	80
Micronaire-----------------units 1/	4.5	4.5	4.6	4.5	4.6
Fiber fineness-micrograms per in.2/	4.5	4.6	4.8	4.2	4.7
Fiber maturity------------index 2/	80	79	79	82	80
Fiber tensile strength (Pressley):					
1/8" gauge--------------index 3/	103	108	103	104	105
Zero gauge-----------1,000 p.s.i.	82	85	89	84	86
Nonlint content------------percent	3.7	1.7	3.0	3.7	3.0
Color of raw cotton: 4/					
Reflectance-------------------Rd	72.5	76.5	73.4	71.3	73.3
Yellowness--------------------+b	8.0	8.5	8.5	8.5	8.8
Sugar content--------------percent	0.0	0.2	0.1	0.2	0.2
Acid-alkaline value-----pH units 5/	7.4	7.3	7.9	8.0	6.8
Processing Results					
Picker and card waste-------percent	9.0	7.5	8.2	9.9	8.6
Neps----per 100 sq. in. of card web	15	16	12	20	14
Yarn skein strength:					
22s-----------------------pounds	115	120	116	107	116
50s-----------------------pounds	40	40	39	37	38
Average break factor 6/	2265	2320	2251	2102	2226
Yarn appearance:					
22s------------------------grade	B	B	B	C+	B
50s------------------------grade	C+	C	C+	D+	C+
Average index 7/	105	100	105	90	105

Continued on page 9

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour, crop of 1956--Continued

Test item	Deltapine 15				
	Louisiana:	Mississippi			
	Winnsboro	Aberdeen	Fayette	Macon	Magee
	Midseason	Early	Midseason	Midseason	Midseason
Raw Cotton Quality					
Grade (official standards)	SLM+	SM	M	M	M
Staple length----------------inches	1-1/16	1-1/16	1-1/16	1-1/16	1-1/32
Fiber length (Fibrograph):					
Upper half mean------------inches	1.05	1.03	1.04	1.05	1.02
Uniformity ratio-----------------	79	81	81	80	79
Micronaire----------------units 1/	4.5	4.2	4.7	4.1	4.2
Fiber fineness-micrograms per in. 2/	4.5	4.3	4.6	4.1	4.3
Fiber maturity------------index 2/	80	78	81	77	78
Fiber tensile strength (Pressley):					
1/8" gauge--------------index 3/	103	103	102	106	102
Zero gauge-----------1,000 p.s.i.	80	87	84	88	82
Nonlint content------------percent	3.9	2.2	2.2	4.2	3.1
Color of raw cotton: 4/					
Reflectance-------------------Rd	75.0	73.5	73.5	72.9	73.5
Yellowness--------------------+b	8.5	8.9	9.2	8.7	8.8
Sugar content--------------percent	0.2	0.2	0.1	0.2	0.2
Acid-alkaline value-----pH units 5/	8.5	6.6	7.3	6.9	7.5
Processing Results					
Picker and card waste-------percent	9.3	6.6	7.1	9.2	8.9
Neps----per 100 sq. in. of card web	11	10	11	13	13
Yarn skein strength:					
22s-----------------------pounds	115	116	114	115	106
50s-----------------------pounds	39	39	39	40	36
Average break factor 6/	2240	2251	2229	2265	2066
Yarn appearance:					
22s-----------------------grade	B	B	B	B	B
50s-----------------------grade	C+	C	C+	C+	C
Average index 7/	105	100	105	105	100

Continued on page 10

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour, crop of 1956--Continued

Test item	Deltapine 15				DPL Fox
	Missouri		Tennessee		Missouri
	Caruthersville	Kennett	Brownsville	Covington	Hayti
	Early	Early	Early	Early	Early
Raw Cotton Quality					
Grade (official standards)	M	M	SM	SM	M
Staple length----------------inches	1-1/16	1-1/16	1-1/16	1-1/16	1-1/16
Fiber length (Fibrograph):					
Upper half mean------------inches	1.04	1.07	.99	1.01	1.07
Uniformity ratio-----------------	81	79	81	81	80
Micronaire----------------units 1/	4.3	4.0	4.4	4.4	4.2
Fiber fineness-micrograms per in.2/	4.2	4.1	4.5	4.6	4.1
Fiber maturity------------index 2/	79	76	78	77	79
Fiber tensile strength (Pressley):					
1/8" gauge--------------index 3/	107	105	102	101	110
Zero gauge-----------1,000 p.s.i.	85	82	84	88	85
Nonlint content------------percent	2.0	2.7	1.9	2.8	2.2
Color of raw cotton: 4/					
Reflectance-------------------Rd	78.0	73.0	73.8	75.2	75.5
Yellowness--------------------+b	8.6	8.5	9.1	8.6	8.6
Sugar content--------------percent	0.1	0.1	0.2	0.1	0.1
Acid-alkaline value-----pH units 5/	6.8	6.9	7.7	7.6	6.6
Processing Results					
Picker and card waste-------percent	7.2	7.6	7.4	7.2	7.8
Neps----per 100 sq. in. of card web	14	12	9	13	15
Yarn skein strength:					
22s----------------------pounds	120	116	116	120	116
50s----------------------pounds	41	40	39	40	41
Average break factor 6/	2345	2276	2251	2320	2301
Yarn appearance:					
22s-----------------------grade	B	B	B	C+	C+
50s-----------------------grade	C	C+	C+	C+	C
Average index 7/	100	105	105	100	95

Continued on page 11

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour, crop of 1956--Continued

Test item	Empire	Lankart 57			
		Oklahoma		Texas	
	Brownfield	Altus	Clinton	Lubbock	Waco
	Early	Early	Early	Early	Late
Raw Cotton Quality					
Grade (offcial standards)	SM	M	SMltsp	M	SMltsp
Staple length----------------inches	1-1/16	1-1/32	29/32	1-1/32	7/8
Fiber length (Fibrograph):					
Upper half mean------------inches	1.03	1.02	.89	1.06	.89
Uniformity ratio-----------------	80	82	81	81	80
Micronaire-----------------units 1/	4.1	4.8	4.5	4.6	4.4
Fiber fineness-micrograms per in. 2/	4.3	4.5	4.8	4.6	4.5
Fiber maturity-------------index 2/	76	80	78	79	78
Fiber tensile strength (Pressley):					
1/8" gauge---------------index 3/	103	101	105	95	97
Zero gauge-----------1,000 p.s.i.	80	81	85	72	83
Nonlint content-------------percent	2.2	2.2	1.9	3.0	2.7
Color of raw cotton: 4/					
Reflectance-------------------Rd	73.6	72.5	71.6	75.4	71.8
Yellowness--------------------+b	9.4	9.2	9.2	9.1	10.1
Sugar content---------------percent	0.3	0.3	0.4	0.3	0.2
Acid-alkaline value-----pH units 5/	7.6	7.9	7.5	6.8	6.6
Processing Results					
Picker and card waste-------percent	7.4	7.0	9.0	8.2	8.8
Neps----per 100 sq. in. of card web	20	14	15	14	6
Yarn skein strength:					
22s----------------------pounds	110	112	110	107	103
50s----------------------pounds	37	38	35	36	33
Average break factor 6/	2135	2182	2085	2077	1958
Yarn skein strength:					
22s-------------------------grade	C+	C+	B	C+	B
50s-------------------------grade	C	C+	C+	C+	C+
Average index 7/	95	100	105	100	105

Continued on page 12

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour, crop of 1956--Continued

Test item	Lankart 57		Lankart 611	Northern Star
	Texas			
	Waxahachie	Wilson	Idalou	Lubbock
	Late	Early	Early	Early
Raw Cotton Quality				
Grade (official standards)	SLMltsp	M	SMltsp	SMltsp
Staple length--------------------inches	7/8	1	1	1
Fiber length (Fibrograph):				
Upper half mean---------------inches	.88	.96	.99	.99
Uniformity ratio---------------------	80	79	80	81
Micronaire-------------------units 1/	4.0	4.4	3.8	4.0
Fiber fineness---micrograms per in. 2/	4.4	4.3	4.0	4.4
Fiber maturity----------------index 2/	75	79	75	74
Fiber tensile strength (Pressley):				
1/8" gauge------------------index 3/	98	100	106	100
Zero gauge-------------1,000 p.s.i.	87	72	81	77
Nonlint content----------------percent	7.5	2.4	2.0	2.8
Color of raw cotton: 4/				
Reflectance-----------------------R_d	69.2	72.0	75.5	73.6
Yellowness-----------------------+b	8.5	9.6	8.9	9.1
Sugar content------------------percent	0.2	0.4	0.4	0.3
Acid-alkaline value--------pH units 5/	8.5	7.8	7.6	7.7
Processing Results				
Picker and card waste----------percent	13.5	9.0	8.1	8.5
Neps-------per 100 sq. in. of card web	11	21	18	15
Yarn skein strength:				
22s--------------------------pounds	106	100	108	109
50s--------------------------pounds	35	34	37	36
Average break factor 6/	2041	1950	2113	2099
Yarn appearance:				
22s----------------------------grade	C+	C+	C+	C+
50s----------------------------grade	D+	C	D+	D+
Average index 7/	90	95	90	90

Continued on page 13

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour, crop of 1956--Continued

Test item	Northern Star	Plains		
	Texas	Alabama		
	O'Brien	Centre	Montgomery	
	Midseason	Early	Early	Midseason
Raw Cotton Quality				
Grade (official standards)	M	SM	M	M+
Staple length------------------inches	1	1	1-1/16	1-1/32
Fiber length (Fibrograph):				
Upper half mean--------------inches	1.04	.94	1.02	.97
Uniformity ratio------------------	81	78	77	75
Micronaire-------------------units 1/	4.2	4.5	4.0	4.2
Fiber fineness---micrograms per in. 2/	4.4	4.5	3.9	4.3
Fiber maturity---------------index 2/	77	79	77	77
Fiber tensile strength (Pressley):				
1/8" gauge----------------index 3/	104	97	97	91
Zero gauge-------------1,000 p.s.i.	77	83	79	83
Nonlint content---------------percent	3.2	2.0	2.4	2.4
Color of raw cotton: 4/				
Reflectance----------------------Rd	75.5	77.5	76.8	74.6
Yellowness-----------------------+b	8.5	8.9	8.7	8.6
Sugar content-----------------percent	0.4	0.1	0.1	0.0
Acid-alkaline value--------pH units 5/	7.8	7.0	7.6	7.3
Processing Results				
Picker and card waste---------percent	8.2	7.6	7.6	7.3
Neps-------per 100 sq. in. of card web	19	13	17	16
Yarn skein strength:				
22s-------------------------pounds	115	115	124	118
50s-------------------------pounds	39	37	42	40
Average break factor 6/	2240	2190	2414	2298
Yarn appearance:				
22s---------------------------grade	C+	B	C+	B
50s---------------------------grade	C	C+	C+	C+
Average index 7/	95	105	100	105

1/ Fiber fineness and maturity in combination, as measured on untreated samples.

2/ Determined by the Causticaire method using the Micronaire instrument.

3/ Index of 100 equals a Pressley ratio of 3.19, which was the average strength of 1954 commercial crop of upland cotton in the United States.

4/ Determined by the Nickerson-Hunter Colorimeter on raw stock. Rd values indicate percent reflectance from 0 to 100 and +b values indicate degree of yellowness.

5/ Values below 7.0 indicate acidity. Values above 7.0 indicate alkalinity which when associated with abnormally low sugar content may indicate fiber degradation from the action of micro-organisms.

6/ Based on yarn skein strength of the two yarn numbers spun.

7/ Based on two numbers spun. Index of average quality equals 100.

Table 3.--Results of classification, fiber tests, and carded and combed (in parentheses) yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 6-1/2 pounds per hour, crop of 1956.

Test item	Acala 1517C	Coker 124	
	New Mexico	Mississippi	
	Las Cruces	Heathman	Lake Cormorant
	Early	Early	Early
Raw Cotton Quality			
Grade (official standards)	SM	M	SLM
Staple length----------------------inches	1-1/8	1-3/32	1-1/32
Fiber length (Fibrograph):			
Upper half mean------------------inches	1.20	1.07	1.06
Uniformity ratio----------------------	82	82	79
Micronaire----------------------units 1/	3.8	4.0	4.0
Fiber fineness-------micrograms per in. 2/	3.8	4.1	4.1
Fiber maturity-------------------index 2/	77	77	77
Fiber tensile strength (Pressley):			
1/8" gauge--------------------index 3/	120	110	106
Zero gauge-----------------1,000 p.s.i.	85	85	85
Nonlint content-------------------percent	2.2	2.8	3.6
Color of raw cotton: 4/			
Reflectance---------------------------R_d	80.8	72.5	76.6
Yellowness---------------------------+b	7.9	8.4	7.9
Sugar content---------------------percent	0.2	0.1	0.2
Acid-alkaline value-----------pH units 5/	7.9	7.5	8.1
Processing Results			
Picker and card waste-------------percent	7.8	8.0	9.6
Comber waste----------------------percent	14.0	16.7	17.1
Neps----------per 100 sq. in. of card web	19	21	10
Yarn skein strength: 6/			
22s-----------------------------pounds	150 (161)	136 (149)	132 (147)
50s-----------------------------pounds	53 (57)	48 (53)	47 (51)
Average break factor 7/	2975 (3196)	2692 (2964)	2627 (2892)
Yarn appearance: 6/			
22s------------------------------grade	C+ (B)	C+ (B)	C+ (B)
50s------------------------------grade	C (C+)	C (C+)	C+ (C+)
Average index 8/	95 (105)	95 (105)	100 (105)

Continued on page 15

Table 3.--Results of classification, fiber tests, and carded and combed (in parentheses) yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 6-1/2 pounds per hour, crop of 1956--Continued

Test item	Coker 100 W	Delfos 9169	
	North Carolina	Arkansas	Missouri
	Shelby	Black Oak	Hayti
	Early	Early	Early
Raw Cotton Quality			
Grade (official standards)	SM	M	SM
Staple length------------------------inches	1	1-1/16	1-3/32
Fiber length (Fibrograph)			
Upper half mean-------------------inches	.96	1.10	1.04
Uniformity ratio------------------------	81	78	79
Micronaire-----------------------units 1/	4.6	4.0	3.9
Fiber fineness-------micrograms per in. 2/	4.6	4.1	3.9
Fiber maturity------------------index 2/	80	76	76
Fiber tensile strength (Pressley):			
1/8" gauge---------------------index 3/	99	105	99
Zero gauge-----------------1,000 p.s.i.	85	83	80
Nonlint content--------------------percent	2.4	2.6	2.1
Color of raw cotton: 4/			
Reflectance---------------------------R_d	72.5	73.0	74.6
Yellowness----------------------------+b	8.9	9.0	8.6
Sugar content----------------------percent	0.3	0.1	0.2
Acid-alkaline value-------------pH units 5/	7.0	7.7	7.0
Processing Results			
Picker and card waste--------------percent	7.9	8.9	8.0
Comber waste-----------------------percent	17.9	14.3	18.3
Neps-----------per 100 sq. in. of card web	9	15	18
Yarn skein strength: 6/			
22s--------------------------------pounds	114 (130)	130 (143)	121 (135)
50s--------------------------------pounds	37 (44)	46 (50)	41 (46)
Average break factor 7/	2179 (2530)	2580 (2823)	2356 (2635)
Yarn appearance: 6/			
22s---------------------------------grade	B+ (B+)	B (B+)	B (B+)
50s---------------------------------grade	C+ (B)	C+ (C+)	C+ (B)
Average index 8/	110 (115)	105 (110)	105 (115)

1/ Fiber fineness and maturity in combination, as measured on untreated samples.

2/ Determined by the Causticaire method using the Micronaire instrument.

3/ Index of 100 equals a Pressley ratio of 3.19, which was the average strength of 1954 commercial crop of upland cotton in the United States.

4/ Determined by the Nickerson-Hunter Colorimeter on raw stock. R_d values indicate percent reflectance from 0 to 100 and +b values indicate degree of yellowness.

5/ Values below 7.0 indicate acidity. Values above 7.0 indicate alkalinity which when associated with abnormally low sugar content may indicate fiber degradation from the action of micro-organisms.

6/ Data in parentheses are for combed yarn process.

7/ Based on yarn skein strength of the two yarn numbers spun.

8/ Based on two numbers spun. Index of average quality equals 100.